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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,102	01/19/2001	Martin Thomas	10191/1663	8931

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EXAMINER	
BAUM, RONALD	
ART UNIT	PAPER NUMBER
2136	

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/766,102	THOMAS ET AL.	
	Examiner	Art Unit	
	Ronald Baum	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in reply to applicant's correspondence of 23 March 2006.

2. Claims 1-16 are pending for examination.

3. Claims 1-16 remain rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirov et al, U.S. Patent 6,138,236 and further in view of below.

It is noted that Mirov et al does not disclose in the reference embodiment of a monolithic IC, smartcard, etc., configuration encompassing the generally integrated arrangement of the microcomputer and storage arrangement. However, the examiner asserts that it would have been obvious to one ordinary skill in the art at the time the invention was made to configure the microcomputer and storage arrangement generally, and the Mirov et al device more particularly, in an integrated arrangement so configured as per the claim limitations below. A recitation directed to the manner in which a claimed apparatus is intended to be used does not distinguish the claimed apparatus from the prior art if prior art has the capability to do so (See MPEP 2114 and Ex Parte Masham, 2 USPQ2d 1647 (1987)). The prior art is replete with references

disclosing generally integrated and more specifically mutually allocated microcomputer and storage arrangements.

5. As per claim 1; "A method for protecting a microcomputer system from manipulation of data stored in a storage arrangement of the microcomputer system, the microcomputer system including a microcomputer allocated to the storage arrangement, comprising the steps of:

causing the microcomputer to

access the storage arrangement for processing the data *[Abstract, figure 1 and accompanying description, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63]*; and

before the storage arrangement is accessed, performing the steps of:

assigning an individual identifier to one of

the allocated microcomputer and

the storage arrangement,

generating a comparison code and

storing the comparison code in the storage arrangement as a function of the individual identifier *[Abstract, figure 1 and accompanying description, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63]*, and

at a time that is one of before and during an operation of the microcomputer system,

generating a security code as a function of the individual identifier and

comparing

the security code with

the comparison code *[Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63]*,

wherein the allocated microcomputer accesses the storage arrangement only if

the security code agrees with

the comparison code *[Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, col. 4,lines 18-55, whereas the aspect of the verification and data hashes generated and subsequently compared by the comparator such that; a match occurring allows for the subsequent (permitted) booting/execution of stored program data (and inherent access to said data) versus the not properly verified and therefor not permitted to execute (and inherent restricted access to said data), clearly encompasses the claimed limitations as broadly interpreted by the examiner.]*,

and

wherein

the allocated microcomputer is assigned only to the storage arrangement and

the storage arrangement is assigned only to the microcomputer

so that

the assigned, allocated microcomputer and

the assigned storage arrangement can operate only with each other.";

Further, as per claim 10, this claim is the system claim for the method claim 1 above, and is rejected for the same reasons provided for the claim 1 rejection, as such; "A storage

arrangement in which data are stored and to which is allocated at least one microcomputer that accesses the storage arrangement for processing the data, comprising:

an arrangement for

storing a comparison code that is generated as a function of an individual identifier assigned to one of

the at least one microcomputer and

the storage arrangement; and

an arrangement for,

at a time that is one of before and during an operation of the storage arrangement,

generating a security code as a function of the individual identifier and for comparing

the security code with

the comparison code,

wherein the microcomputer accesses the storage arrangement only if

the security code agrees with

the comparison code, and

wherein

the microcomputer is assigned only to the storage arrangement and

the storage arrangement is assigned only to the microcomputer

so that

the assigned microcomputer and

the assigned storage arrangement can operate only with each other.";

Further, as per claim 14, this claim is the system claim for the method claim 1 above, and is rejected for the same reasons provided for the claim 1 rejection, as such; "A microcomputer system, comprising:

a microcomputer: and

a storage arrangement assigned to the microcomputer, wherein:

data are stored in the storage arrangement,

the microcomputer accesses the storage arrangement in order to process the data,

in the storage arrangement, a comparison code that is generated as a function of an individual identifier assigned to one of

the microcomputer and to

the storage arrangement is stored, and

the microcomputer includes an arrangement for, at a time that is one of before and during an operation of the microcomputer system,

for generating a security code as a function of the individual identifier and to

compare

the security code with

the comparison code,

wherein the microcomputer accesses the storage arrangement only if

the security code agrees with

the comparison code, and

wherein

the microcomputer is assigned only to the storage arrangement and

the storage arrangement is assigned only to the microcomputer

so that

the assigned microcomputer and

the assigned storage arrangement can operate only with each other.".

6. Claim 2 ***additionally recites*** the limitation that; "The method according to claim 1, wherein:

the data corresponds to a program.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, whereas the "plurality of micro code" is a stored program, and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

Further, as per claim 11, this claim is the system claim for the method claim 2 above, and is rejected for the same reasons provided for the claim 2 rejection, as such; "The storage arrangement according to claim 10, wherein:

the data correspond to a program.".

Further, as per claim 15, this claim is the system claim for the method claim 2 above, and is rejected for the same reasons provided for the claim 2 rejection, as such; "The microcomputer according to claim 14, wherein:

the data correspond to a program.".

7. Claim 3 ***additionally recites*** the limitation that; "The method according to claim 1, wherein:

a program stored in the storage arrangement is protected.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, whereas the "security sensitive environments require that the micro code be tamper proof..." constitutes a protected stored program, and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

8. Claim 4 ***additionally recites*** the limitation that; "The method according to claim 1, wherein before the storage arrangement is accessed, the method further comprises the steps of:

storing the individual identifier as

the comparison code in the storage arrangement; and

at the time that is one of before and during the operation of the microcomputer system, performing a check as to whether

the comparison code agrees with

the individual identifier, used as the security code, of the allocated

microcomputer.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, col. 5,line 51-col. 8,line 26, whereas the public key encryption oriented digital signature constitutes an individual identifier as the comparison code, and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

9. Claim 5 ***additionally recites*** the limitation that; "The method according to claim 1, wherein:

the storage arrangement normally cooperates with the allocated microcomputer only when

the security code agrees with

the comparison code.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, col. 5,line 51-col. 8,line 26, whereas the public key encryption oriented digital signature comparison success allows for the boot-up process to continue such that "...the trust level of the unsecured micro-code is raised to a level of trusted, other boot data such as the boot blocks of the disk drive...", and thereby constitutes the storage arrangement cooperating with the allocated microcomputer when the security code agrees with the comparison code, and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

10. Claim 6 ***additionally recites*** the limitation that; "The method according to claim 1, wherein:

before an operation of the storage arrangement, after every start-up of the storage arrangement,

the security code

is generated and

is compared with

the comparison code.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, col. 5,line 51-col. 8,line 26, whereas the public key encryption oriented digital signature comparison success allows for the boot-up process to continue such that "...the trust level of the unsecured micro-code is raised to a level of trusted, other boot data such as the boot blocks of the disk drive..." , and thereby constitutes the storage arrangement cooperating with the allocated microcomputer when the security code agrees with the comparison code, again, throughout the memory access functions during "start-up of the storage arrangement", and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

11. Claim 7 ***additionally recites*** the limitation that; "The method according to claim 6, further comprising the step of:

placing the storage arrangement in a mode in which,

after every start-up, the storage arrangement is switched from

an inactive state to

an active state only when

the security code agrees with

the comparison code.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, col. 5,line 51-col. 8,line 26, whereas the public key encryption oriented digital signature comparison success allows for the boot-up process to continue such that "...the trust level of the unsecured micro-code is raised to a level of trusted, other boot data such as the boot blocks of the disk drive..." , and thereby constitutes the storage arrangement cooperating with the allocated microcomputer when the security code agrees with the comparison code, again, throughout the memory access functions during "start-up of the storage arrangement", and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

Further, as per claim 12, this claim is the system claim for the method claim 7 above, and is rejected for the same reasons provided for the claim 7 rejection, as such; "The storage arrangement according to claim 10, wherein:

the storage arrangement is capable of being, placed in a mode in which,

after every start-up, the storage arrangement is switched from

an inactive state to

an active state only when

the security code agrees with

the comparison code.".

Further, as per claim 16, this claim is the system claim for the method claim 7 above, and is rejected for the same reasons provided for the claim 7 rejection, as such; "The microcomputer according to claim 14, wherein:

the microcomputer is capable of being placed in a mode in which,

after every start-up, the microcomputer is switched from

an inactive state to

an active state only when

the security code agrees with

the comparison code.".

12. Claim 8 ***additionally recites*** the limitation that; "The method according to claim 6, further comprising the step of:

placing the allocated microcomputer in a mode in which,

after every start-up, the allocated in microcomputer is switched from

an inactive to

an active state only when

the security code agrees with

the comparison code.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, col. 5,line 51-col. 8,line 26, whereas the public key encryption oriented digital signature comparison success allows for the boot-up process to continue such that "...the trust level of the unsecured micro-code is raised to a level of trusted, other boot data such as the boot blocks of the disk drive...", and thereby constitutes the storage arrangement cooperating with the allocated microcomputer when the security code agrees with the comparison code, again, throughout the memory access functions during "start-up of the storage arrangement", and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

13. Claim 9 ***additionally recites*** the limitation that; "The method according to claim 1, further comprising the steps of:

executing a validation program stored in

a read-only memory of the allocated microcomputer;

determining a code word in the validation program from

at least one part of a memory content of the storage arrangement in accordance with a key; and

comparing

the code word with

a comparison code word stored in the storage arrangement.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, col. 5,line 51-col. 8,line 26, whereas

the public key encryption oriented digital signature comparison success allows for the boot-up process to continue such that "...the trust level of the unsecured micro-code is raised to a level of trusted, other boot data such as the boot blocks of the disk drive...", and thereby constitutes the storage arrangement cooperating with the allocated microcomputer when the security code agrees with the comparison code, again, throughout the memory access functions during "start-up of the storage arrangement", and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

14. Claim 13 ***additionally recites*** the limitation that; "The storage arrangement according to claim 10, wherein:

the storage arrangement corresponds to a flash memory.".

The teachings of Mirov et al suggest such limitations (Abstract, figure 1-4 and accompanying descriptions, col. 1,lines 13-col. 2,line 4, col. 2,lines 7-63, whereas the "... flash PROM is divided into two main sections..." is a storage arrangement corresponding to a flash memory, and therefore clearly encompasses the claimed limitations as broadly interpreted by the examiner.).

Response to Amendment

15. As per applicant's argument concerning the lack of teaching of Mirov et al of a generally integrated and more specifically mutually allocated microcomputer and storage arrangement, the examiner has fully considered the arguments and finds them not to be persuasive, as discussed above for the 35 U.S.C. 103(a) intended use aspect of the rejection. Further, the claim language

specifically dealing with the phrase 'allocated microcomputer is assigned only ... can operate only with each other ...' is sufficiently broad such that the Mirov et al reference embodiment(s), would therefore be applicable in the rejection.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

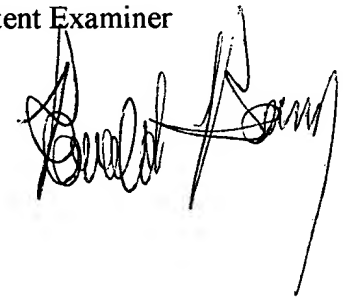
16. Any inquiry concerning this communication or earlier communications from examiner should be directed to Ronald Baum, whose telephone number is (571) 272-3861, and whose unofficial Fax number is (571) 273-3861. The examiner can normally be reached Monday through Thursday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh, can be reached at (571) 272-3795. The Fax number for the organization where this application is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. For more information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronald Baum

Patent Examiner



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